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A Theory of Special Operations

The Origin, Qualities, and Use of SOF

Robert G. Spulak, Jr.

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JSOU Report 07-7
October 2007

Joint Special Operations University and the Strategic Studies Department

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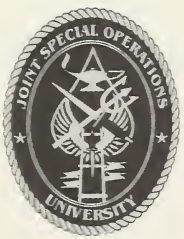

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Foreword

As we enter the seventh year of the current conflict against violent-extremist terror networks, the importance of Special Operations Forces (SOF) in this fight remains crucial. SOF were the lead element in Afghanistan as the initial response to the 9/11 terror attacks. It becomes clearer this conflict is a long war and large-scale combat operations in Iraq will eventually be reduced. These two factors will likely cause the United States leadership to increasingly turn to SOF, in conjunction with other government departments and agencies, to prosecute the campaign against violent extremists.

In many ways, SOF will be the force of choice, because SOF skill sets and capabilities are optimized to conduct operations against these types of terror groups. The challenge will be to delineate what makes SOF "special" and therefore distinct from conventional or general purpose forces. As the conventional military forces continue to improve their capabilities, it is interesting and quite useful to ask the question: Are SOF really unique? Robert Spulak's treatise is an answer to this question.

Building on Rear Admiral William McRaven's seminal work "Spec Ops: Case Studies in Special Operations Warfare: Theory and Practice," Dr. Spulak expands McRaven's theory beyond direct action and small raid concepts and builds a theory of SOF looking at SOF as a whole and across the spectrum of operations. He focuses on SOF attributes and how they allow SOF to accomplish missions beyond the capabilities of conventional forces. Through the prism of the principles of war, the author argues SOF's inherent capabilities allow them to overcome the risk and obstacles that would preclude conventional forces from undertaking the mission.

The challenge today is how to focus SOF on these "special" missions. Throughout history, leaders have a tendency to overuse or misuse SOF. By the very nature of SOF attributes, SOF will always be a limited force vis-à-vis conventional forces. Consequently, care must be taken to use SOF where its special skills and capabilities are best suited. I encourage you to read this monograph, then review McRaven's work. These works are an excellent way to appreciate SOF and their role in the complex current environment and conflict.

Michael C. McMahon, Lt Col, USAF
Director, JSOU Strategic Studies Department

About the Author

Dr. Robert Spulak received his Ph.D. in Physics from the University of New Mexico in 1988. His prior degrees were in Physics, Astronomy, and Nuclear Engineering. Dr. Spulak is presently manager of the Strategic Studies Department at Sandia National Laboratories. He is Sandia's principal point of contact for special operations and is the program area lead for internal Sandia investments in research with potential special operations applications. At Sandia, he has performed studies on topics including technologies, weapon systems, defense policy, terrorism, and international relations and has published in Strategic Review and Parameters.

Dr. Spulak has been an adjunct professor of Political Science at the University of New Mexico in U.S. National Security. He was one of the first members of the U.S. Special Operations Command (USSOCOM) Future Concepts Working Group and was a member of the Naval Special Warfare (NSW) Future Concepts Working Group. Dr. Spulak has invested significant time with special operations components—for example, observing training, operational planning, and field and fleet exercises—though cooperative arrangements such as a Memorandum of Agreement with NSW Group ONE. He contributed to USSOCOM concepts and publications such as the Special Operations Forces (SOF) Vision, Desired Operational Capabilities, and SOF Attributes. He has widely briefed the special operations community, including the Office of the Assistant to the Secretary of Defense for Special Operations and Low-Intensity Conflict (SO/LIC), the National Defense Industrial Association SO/LIC Symposium, and a NSW commanders' conference on San Clemente Island. As an associate fellow with the Joint Special Operations University (JSOU) Strategic Studies Department, he provides advice and assistance to USSOCOM strategic planning initiatives. In addition, Dr. Spulak is a sponsored member of the UDT-SEAL Association.

Acknowledgements

This work owes its existence to Rear Admiral William H. McRaven who, as the commanding officer of SEAL Team THREE and later as the Chief of Staff of Naval Special Warfare Group ONE, long ago asked me to think about a "theory" for the employment of SOF to help guide his visionary efforts to design Naval Special Warfare forces for the future. He provided many unique opportunities, but my efforts at the time were not satisfactory to me or, I fear, to him. It is a testament to Bill's ability to lead that he continued to inspire me even *in absentia*.

I want to also thank Colonel Joseph D. Celeski (USA, Ret.), Commander David L. Courtney (USN, Ret.), Colonel John D. Jogerst (USAF, Ret.), Dr. Jessica Glicken Turnley, and Major Steven P. Zynda (USA) as well as several JSOU staff members for reading earlier versions of the paper and providing many useful comments and ideas.

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A Theory of Special Operations: the Origin, Qualities, and Use of SOF

A theory of special operations: Special operations are missions to accomplish strategic objectives where the use of conventional forces would create unacceptable risks due to Clausewitzian friction. Overcoming these risks requires special operations forces that directly address the ultimate sources of friction through qualities that are the result of the distribution of the attributes of SOF personnel.

Introduction

> *We sleep safe in our beds because rough men stand ready in the night to visit violence on those who would do us harm.*
>
> *— George Orwell*

Special Operations Forces (SOF) are small, specially organized units manned by carefully selected people using modified equipment and trained in unconventional applications of tactics against strategic and operational objectives. Further, the successful conduct of special operations relies on individual and small unit proficiency in specialized skills applied with adaptability, improvisation, and innovation against adversaries often unprepared to react. It has often been stated that the unique capabilities of SOF complement those of conventional forces.

What are "the unique capabilities of SOF?" They are almost never named. And why should SOF only "complement" the capabilities of conventional forces instead of having strategic roles of their own?

One expert defines special operations as follows: "Unconventional actions against enemy vulnerabilities in a sustained campaign, undertaken by specially designated units, to enable conventional operations and/or resolve economically politico-military problems at the operational or strategic level that are difficult or impossible to accomplish with conventional forces alone."[1] Unfortunately, even this careful and thoughtful description is a definition by exception. If special operations are "unconventional," they are defined only relative to what is "conventional."

If special operations are "unconventional," they are defined only relative to what is "conventional."

As the capabilities of conventional forces improve, they may be able to perform missions that once were the responsibility of SOF. For example, fighting (and flying) at night with night-vision equipment was once a characteristic of SOF. At the time of Operation Eagle Claw (the 1980 Iranian hostage rescue mission) even SOF had limited experience with night vision: "At the outset, none of our C-130 units had any night-vision goggles, nor were there procedures for their use."[2] Of course, the use of night vision is now widespread in U.S. conventional operations. So the period when fighting at night was a unique capability of SOF was limited.

By the above definition, the first atomic bombings could be considered (incorrectly, as we shall see) special operations. The pilots were using technology that the strategic bombing force did not have: both the atomic bomb and specially modified B-29s. They trained in special maneuvers to safely deliver the weapon, the missions had strategic impact, and they flew in alone to avoid attracting hostile attention. But after the war the production of nuclear weapons vastly increased and the "conventional" strategic bombing force expanded to include nuclear weapons. The conventional air force could have been said to have developed a "SOF-like" capability. The SOF application of nuclear weapons became the use of specialized and limited weapons, in part through specialized delivery means such as jumping and diving.[3]

Therefore, special operations (and SOF) cannot theoretically be defined in terms of *specific* and unchanging missions, skills, or capabilities. In practice, special operations have been defined in the context of the contemporary war. During wartime, special men emerge who have the personal capability to overcome risk and the skills that allow them to perform strategically important tasks (when organized into special and small units) that conventional forces cannot. Historically, during peacetime, SOF have been disbanded as the need for overcoming the limitations of conventional forces has not been as apparent without ongoing conventional operations in war.[4]

... special operations (and SOF) cannot theoretically be defined in terms of specific and unchanging missions, skills, or capabilities.

If special operations depend on the context of the war and the advancing capabilities of conventional forces, is it then even possible to create a theory of special operations? And, more importantly, if special

operations are means to extend the effectiveness of conventional forces ("complement" them), do we even need a theory?

We need a theory for at least three reasons. First, the SOF role is growing. SOF (specifically USSOCOM) are now tasked to take the lead in the war on terrorism. Thus, special operations cannot be defined only in the context of conventional forces at war since the war is not to be fought predominately by conventional forces. In addition, the Quadrennial Defense Review[5] asserts that future security challenges (*irregular*, *catastrophic*, and *disruptive*) will not be easily addressed by conventional forces and will require a greater role for special operations. We need to know what SOF can do, not only to effectively fight the current war on terrorism but to effectively address the future challenges to our security.

Second, even if we do not accept the current conventional wisdom, special operations have always been discussed in terms of their potential and actual strategic impact.[6] James Kiras, in a comprehensive dissertation on SOF and strategy, asserts that strategy has an immutable nature, independent of technology or tactics, and that the nature of strategy is to cause "attrition" (broadly defined): "In the end, however, the decision to abandon the conflict is based on a cumulative erosion, or attrition, of an adversary's material and nonmaterial resources."[7] But he also concludes, "Strategy is complex precisely because internal and external competition between human beings, whose behavior under stress varies individually, makes the outcome largely unpredictable."[8]

Thus, in this complex unpredictable environment, Kiras finds no theory of special operations apart from the contributions that SOF can make, in the context of contemporary conventional capabilities, to the ultimate strategic goal: "The cumulative effect of numerous disparate special operations, working towards a common goal in conjunction with conventional forces is the attrition of an adversary's key moral and material resources."[9] However, even as strategy has an immutable nature, so do the characteristics and limitations of conventional forces. There is a need for a theory of special operations to guide the applications of SOF to strategic ends beyond the *ad hoc*, immediate, and creative mind of the military planner implementing strategy.

A theory of special operations must therefore start with an understanding of what conventional forces cannot do and why. Conventional

forces do have limitations, the most prominent of which is Clausewitzian friction; in fact, military forces have been shaped by these limitations.[10] This is not to say that friction does not apply to SOF as well, but instead that the origin of SOF is due to the impact of friction on military forces. As an example of the application of the concept of friction to special operations, William H. McRaven has published a theory of *direct action* that explains how small forces can gain a temporary decisive advantage, even over larger numbers or entrenched positions.[11] The purpose of the present paper is to generalize this idea to provide a theory of SOF based on the enduring limitations of conventional forces, based in turn on the immutable nature of war itself.

Why *war*? SOF are certainly responsible for many important functions, some of them included in the SOF core tasks, in operations other than war—for example, foreign internal defense, counterterrorism, and civil affairs.[12] But SOF's role in warfighting is critically important in *defining* SOF and determining the capabilities that must be invented, emphasized, and maintained. The value of SOF in peacetime is derived from their unique roles in war. As General Peter Schoomaker, commander, USSOCOM, wrote in the relative calm before 11 September 2001, "As SOF engage in additional peacetime operations, it is important to remember that we are—first and foremost—warriors."[13]

The theory developed herein describes special operations (both in war and in operations other than war) as a response to the needs of war. The specific strategic missions that conventional forces cannot perform without unacceptable risks of various kinds depend on the context of the war. But the origin of these risks in general is due to friction, a critical part of the operational environment. Conventional forces cannot, in general, overcome these risks, creating the need for SOF that can.

The present theory does not describe the current organizational structure or specific missions of U.S. SOF. However, the third reason for needing a theory is to improve the institution of SOF by creating the ability to explain what institutional features (e.g., organization, doctrine, use of technology) help or hinder the strategic uses of SOF. To summarize, we need a theory of special operations to help effectively fight the current war on terrorism, to guide the use of the strategic capability represented by special operations, and to explain what institutional features help or hinder the strategic uses of SOF. This paper does not emphasize these applications (other than some

illustrative examples), but provides a theory to use as the basis for discussion.

The paper first provides these descriptions:

a. The enduring nature of war and how this leads to the requirements and limitations of military forces
b. The relationship between conventional forces and SOF to explain the origin of SOF.

From these descriptions, the text continues as follows:

a. Explores what *creative* means and the origin of the *flexibility* of SOF.
b. Explains how the qualities of SOF directly address the origins of friction.
c. Summarizes some of the resulting characteristics of SOF.

Using these concepts, examples of SOF's strategic applications follow. All of these considerations, specific to SOF, are then synthesized as a theory of special operations.

The Limitations of Military Forces

> *All peacetime tests and experiments lack the most fundamental and pervasive aspect of war: fear in a lethal environment.*
>
> — *Trevor Dupuy*

> *War is where cold steel, hot lead, and warm flesh meet.*
>
> — *Rear Admiral Cathal "Irish" Flynn*

Military forces have evolved structurally and have developed the "principles of war" to accommodate the realities of war through lessons earned in blood. In the end, it is the enemy's fear that once his material or moral resources are eroded, he will be subject to destruction in the arena of conflict that removes his will to continue, whether that fear is developed quickly or gradually. As Kiras points out, "Strategy in practice is ultimately about the use of force to erode an adversary's will to continue the struggle politically and militarily. Restated in another way, moral and material erosion is attrition at the strategic level ..."[14] Some authors, including Kiras, distinguish between attrition (or "exhaustion") and "annihilation," which he defines (and rightly dismisses) as "the delivery of a crippling moral blow that makes extended material struggle unnecessary."[15]

Destruction at the strategic level does not necessarily mean enormous numbers of casualties, destruction of sovereignty, or unconditional surrender. The strategic arena of conflict may or may not be limited.[16] But war has its own nature and its own logic. We ignore them at our own peril. *The enduring nature of war is that, within the strategic arena of conflict, we and our enemy are both striving to be able to destroy the other.*[17]

The requirements of military forces are determined by the need to place ourselves in position to destroy the enemy *while at the same time* avoiding too great a risk of deadly consequences to ourselves. (We may hope that the threat of destruction will compel the enemy before it is necessary to destroy him.) These two fundamental needs are in direct conflict. Both elements will always be present. Technology can affect how we propose to visit destruction upon the enemy and how we might try to avoid it ourselves, but it does not eliminate the underlying conflict of purposes or its effects upon the humans engaged in war. The current concerns about asymmetrical warfare and terrorism illustrate that the enemy will always find a way to hurt us. But avoiding all risk at any cost is as bad as being foolhardy: "Keep vaunting head over heart, and soon the head will arrive at the complete folly of any kind of fight and meekly surrender the treasure to the first bandit with enough heart to demand it."[18] So we are back to the central enduring nature of war and the reason that the principles of war have remained remarkably unchanged through time.[19]

The enduring nature of war creates what Carl von Clausewitz called *friction.* As he famously wrote, "Everything in war is very simple, but the simplest thing is difficult," and "Action in war is like movement in a resistive element."[20] Friction is the "effect of reality on ideas and intentions in war"—that is, the difference between plans and reality.[21] There is a lot of debate about the current relevance of Clausewitz. Criticisms include questions about the continued importance of nation-states, the trinity of state/military/population, war as an instrument of policy, centers of gravity, and the culminating point. Although Clausewitz seems to be weathering the storm just fine, and many would argue that SOF owe more to Sun Tzu than to Clausewitz anyway, these criticisms actually do not apply to the concept of *friction* that is rooted in the enduring nature of war and which is central to the theory of special operations.

Michael Mazarr has discussed the future of conflict and makes a distinction between the character of battle, the form of warfare, and the nature of conflict.[22] The character of battle is "... the clash of arms where one army physically meets another. This is the meeting point that generates statements about the 'unchanging nature of war'—for example, violence, blood, courage, and willpower." The form of warfare is "the tactical and operational art governing units in battle—infantry war versus *blitzkrieg*, insurgency versus classical force-on-force duels. Whereas the character of battle may be eternal, the form of warfare constantly evolves, responding to new technologies, new tactics, and new social organizations." Finally, the nature of conflict "deals with the causes and character of severe political-military-socioeconomic disputes in the international system. International conflict generates the context for warfare, but also much else—Schellingesque bargaining games, coercive diplomacy, deception, and artful dodges short of warfare and battle."[23]

So what is fundamental, what makes it war, and what creates the enduring nature of war is what Mazarr calls the character of battle. Any conflict, even with non-Clausewitzian forms and causes, includes the likelihood of deadly interaction with the enemy. Mazarr also points out that the form of warfare is shaped by the nature of conflict—that is, "The specific *tools* used by the combatants, and the resulting styles of warfare and battle, will vary but will always flow from the reasons for and the contenders in international conflict."[24] But the factor that limits military forces from adopting any arbitrary form of warfare, and any arbitrary tools and styles, is the reality of what he calls the character of battle: the enduring nature of war that gives rise to friction.

In his analysis, Barry Watts ultimately identifies eight sources of friction in Clausewitz's classic book *On War*:

1. Danger's impact on the ability to think clearly and act effectively in war
2. The effects on thought and action of combat's demands for exertion
3. Uncertainties and imperfections in the information on which action in war is based
4. Friction in the narrow sense of the internal resistance to effective action stemming from the interactions between

the many men and machines making up one's own forces
5. The play of chance, of good luck and bad, whose consequences combatants can never fully foresee
6. Physical and political limits to the use of military force
7. Unpredictability stemming from interaction with the enemy
8. Disconnects between ends and means in war.[25]

The proponents of concepts such as Network Centric Warfare (an arbitrary change in Mazarr's "form of warfare") actually recognize the importance of friction as the source of the requirements and characteristics of military forces:

> Dealing with the fog and friction of war places the relative emphasis on not making a big mistake, not harming one's own, achieving a semblance of cohesion, maximizing effectiveness, and achieving economies of force.
>
> Deliberate planning, massing of forces, use of reserves, rigid doctrine, restricted information flows, and emphasis on unity of command are among the legacies of centuries of dealing with the fog and friction of war.[26]

These proponents, however, also believe that technology (specifically information technologies) will greatly reduce or eliminate friction. They assume that friction is due to incomplete information and limitations in the mechanics of making decisions: "Decision-making processes no longer need focus on the defensive-oriented approaches that were required to hedge against uncertainties (fog and friction)."[27]

On the other hand, Watts asserts that friction is *the* central fact of war and could be used to derive a general theory of war itself.

> The evidence and arguments presented so far suggest that the following sorts of propositions could form the basis of a reasonably comprehensive theory of war and conflict:
>
> *Proposition I.* War is a violent, two-sided contest of opposing wills dominated by Clausewitzian friction.
>
> *Proposition II.* Outcomes are highly contingent, and the various indirect effects or second-order consequences arising from a campaign or war may not be knowable until some time after the conflict has ended.

Proposition III. In combat, from moment to moment, it is the differential between the levels of general friction experienced by the two sides that matters most.

Proposition IV. So long as human purposes, frailties, proclivities, and limitations remain an integral part of war, Clausewitzian friction will retain the potential to make the difference between success and failure.[28]

Note that these propositions are totally consistent with what we have deduced is the enduring nature of war: whatever the state of technology, we and our enemy are both striving to be able to destroy the other while both of us are dealing with the possibility and the fear that we will be destroyed.

In addition, Frederick Kagan argues that the current fascination with information technologies will not ultimately change the fundamentals of war: "Previous radical changes in the ways and means of warfare, such as those induced by the gunpowder revolution and the industrial revolution, did not render all previous understandings of war irrelevant. They revolutionized time-space relationships on the battlefield, completely redefined tactical formations and drills, and increased firepower by orders of magnitude, but important continuities remained. Commanders still needed to mass their forces—understanding "mass" as the concentration of overwhelming force at the decisive point and time—to defeat their enemies, and they still needed to maneuver, supply, command, staff, and provide intelligence to their forces."[29]

Watts has derived the ultimate sources of friction, expressed in modern terms:

a. Constraints imposed by human physical and cognitive limits, whose magnitude and effects are inevitably magnified by the intense stresses, pressures, and responses of actual combat

b. Informational uncertainties and unforeseeable differences between perceived and actual reality stemming, ultimately, from the spatial temporal dispersion of information in the external environment, in friendly and enemy military organizations, and in the mental constructs of individual participants on both sides

c. The structural nonlinearity of combat processes that can give rise to the long-term unpredictability of results and emergent phenomena by magnifying the effects of unknowable small differences and unforeseen events (or conversely, producing negligible results from large differences in inputs).[30]

Further, he states, "Human limitations, informational uncertainties, and nonlinearity are not pesky difficulties better technology and engineering can eliminate, but *built-in* or *structural* features of the violent interaction between opposing parties pursuing incommensurables ends we call war."

Therefore, friction is the reality that will continue to help determine the requirements and the limitations of military forces, due to the enduring nature of war: the need to place ourselves in position to destroy the enemy while at the same time avoiding too great a risk of deadly consequences to ourselves. In the remainder of this paper, you may notice the reference to the *tension* between threatening or performing destruction and avoiding it. The meaning is not meant to be a static balance or a calculated solution, but the fact that planning and execution of military operations, and war itself, must always take into account both of these fundamental and conflicting needs.

The Relationship between Conventional Forces and SOF

Humans are more important than hardware.
— SOF Truth

In general, military forces are large organizations to accomplish all of the requirements imposed by the nature and principles of war. One reason military forces are large is just the size of the overall task itself, threatening destruction against an enemy and guarding against catastrophe in the environment including friction. For both purposes, all else being equal, more is better. Of course, as we have seen, although large forces are required, the characteristics of large forces are some of the sources of friction that create fundamental limitations ("internal resistance to effective action stemming from the interactions between the many men and machines making up one's own forces").

The large curve (labeled "Military") in Figure 1 represents, schematically, the distribution of some attribute of individual military personnel such as physical endurance, clarity of thought under stress,

aptitude for language or culture, or performance of a specific task. Humans have a distribution of such attributes, which is shown as a "Gaussian" or "normal" distribution that is typical (although an actual distribution for a specific attribute may be somewhat different). The horizontal axis represents the "score" or level of ability for an attribute. The "Military" curve represents (schematically) the number of personnel in the military as a whole who score at a given level. The average ability is represented by the peak of the curve, but many personnel score both above and below the average. The area under the curve is the total number of personnel.

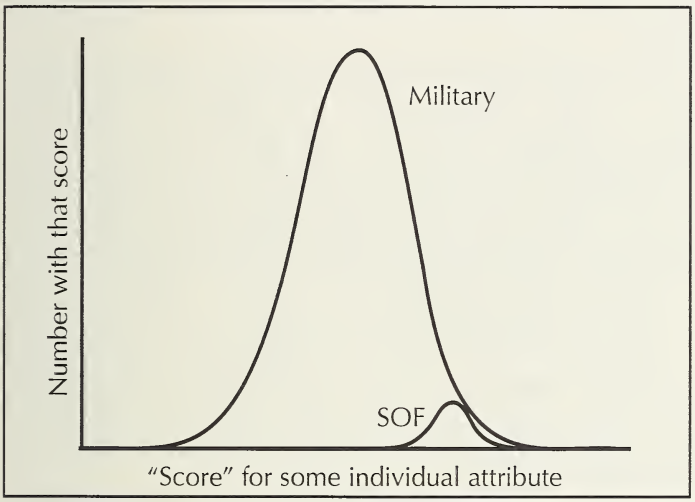

Figure 1. Schematic distribution of the values of a typical individual attribute for SOF and the entire military.

If the total number of personnel is enlarged or reduced, the height of the distribution will change but not the average or the spread if the military personnel are representative of the same recruiting pool of the general population and the same military organization and training. That is why it is difficult to realize the implementation of General Gordon Sullivan's assertion that "More is not better, better is better."[31] Once recruiting, organization, and training are improved or optimized, more is still better.

The small curve (labeled "SOF") represents, schematically, the distribution of the same attribute among members of SOF who are selected out of the larger military population for superior performance in this and many other attributes. SOF are famously selected through rigorous processes that select for a wide variety of attributes, not all of which are probably even known.[32]

One counter-example that has been proposed is Air Force Special Operations Forces (AFSOF) where there is no formal selection process for pilots. AFSOF might be viewed as being defined more by special platforms than by special operators. However, AFSOF do exhibit the creativity and flexibility of other services' SOF.[33] Not all of that is due to platforms or doctrine. Part of selection of attributes is *self-selection* in who is motivated to volunteer for SOF and who is motivated to stay. The physical attributes may be less important in defining the distribution of AFSOF pilots, but other important attributes are certainly self-selected. Another, perhaps more important, factor is the culture of SOF that nurtures and develops the appropriate attributes even after selection.

In the "SOF" distribution, the average performance is much higher and the spread is smaller because there is a minimum standard against which these personnel were selected. Also, since they were selected out of the general military population, the number that score at any given level are fewer than the number who score at that level in the overall population. This last factor limits the overall number of special operators to be a small fraction of the overall number of military personnel. In fact, in this schematic representation, the number of SOF (the area under the SOF curve) is 3.8 percent of the number of total military personnel (the area under the Military curve), which is the approximate percentage of U.S. SOF compared with total U.S. active duty military personnel.

Obviously not all of the high-performing individuals are recruited into SOF. There are still many "high performers" in the conventional distribution. In fact, the nature of the conventional military organization and its capabilities are determined by the entire distribution of personnel. But there is a maximum fraction of the overall military personnel that can meet the standards and be recruited into SOF. *This smaller and tighter distribution of personnel with greater average "attributes" is the source of the nature and capabilities of SOF.*

These distributions help explain how conventional forces perform missions that were once the responsibility of SOF and how this does *not* mean that they are becoming more "SOF-like." This is often discussed in the context of the application of technology, which serves an example here, although the same argument applies to other aspects of military operations such as operational concepts or organization. One of the distinguishing characteristics of SOF is the use of

technology that is not widely available to conventional forces for a variety of reasons, including limited availability, security, cost, extensive or specialized training, and risk. (Historical and current examples include AC-130H/U aircraft, SEAL Delivery Vehicles, fast-roping, High Altitude Low Opening parachuting, Fulton recovery, and ground laser-designated air support.) SOF personnel can utilize such a technology because, due to the distribution of personnel, they are more capable of implementing the additional requirements (e.g., training).

The technology may become more widely adopted in conventional forces for one of two reasons:

a. The characteristics of the technology may change as it matures, (e.g., less expensive, easier to operate), allowing its use by the wider distribution of conventional personnel.

b. The distribution of conventional personnel may, over time, be purposely moved to a greater capability to use this technology through widespread training or recruiting; then the smaller tighter distribution of SOF will also move to greater capability as they are recruited from the conventional military population.

In either case, the conventional personnel will still have a wide distribution of capability, and SOF will still have a smaller tighter distribution with a greater average. If there is then a perceived lack of distinction between SOF and conventional forces, it is likely due to the lack of adoption by SOF of further technology or capability beyond the conventional forces due to the institutionalization of the missions in SOF that the technology (or other advances or changes) enabled. It is not the missions that define special operations but rather the personnel.

It is not the missions that define special operations but rather the personnel.

This is not to say that special operations are defined simply as "what SOF do" (which could be construed as a circular argument). Of course it is the existence of strategic objectives that are beyond the limitations of conventional forces that creates the need for SOF to overcome those limitations and perform missions to accomplish those objectives. But over time it is not specific missions that are designated as "special" or assigned to SOF that define special operations. The missions will change, but the ability to overcome the limitations of conventional forces is embodied in the SOF personnel. If the conventional forces can accomplish the mission, it is time for SOF to move on.

These schematic distributions also illustrate why it is difficult to increase the size of SOF relative to the size of the military as a whole. The only ways to increase the area under the SOF curve are to increase the numbers of personnel recruited into SOF from the high end of the conventional distribution, recruit SOF from outside the conventional military, or lower the selection standards to widen the distribution.

The Origin of SOF

> *The bravest are surely those who have the clearest vision of what is before them, glory and danger alike, and yet notwithstanding, go out and meet it.*
>
> — *Thucydides*
>
> *Who dares wins.*
>
> — *Special Air Service (SAS) motto*

The selection of personnel with a smaller and tighter distribution with greater average "attributes" is necessary but not sufficient to explain the origin of SOF. After all, there are many military specialties requiring specific aptitudes, knowledge, and training that are not shared by military forces in general. What is the difference between SOF and the Judge Advocate General's Corps? Or, for that matter, what is the difference between Navy SEALs and Navy divers? It is the attributes of SOF themselves that matter, of course. And it is worth noting that for SOF the most important attributes may not be physical capabilities but mental and psychological attributes. These many attributes create three fundamental qualities of SOF.

It is the attributes of SOF themselves that matter ...

The major differences between SOF and other narrowly defined military organizations are that SOF are elite warriors, creative, and flexible. This statement is not original, but it is also not as self-evident and mundane as it appears and based on the discussion, we can now define what it means:

a. *Warriors*—SOF are engaged directly in the fundamental nature of war and the implementation of strategy, destroying the enemy or creating his fear that he will be destroyed.

b. *Creative*—SOF can immediately change the combat process, altering the way in which the tension is accommodated between threatening or performing destruction and avoiding it.

c. *Flexible*—SOF units have a much larger range of capabilities and are more independent of other military forces than conventional units.

This is why a "special task" for conventional forces or a "special" capability or technology is not the same thing as special operations. *Elite* forces may also be selected to have a different distribution of some attributes than conventional forces, and they may perform some tasks far better, but they are not organized into the right kind of units and the individuals may not have attributes that allow them to be creative or flexible.

Designation of the SOF core tasks has exacerbated the confusion between temporary missions for SOF and the definition and nature of SOF. USSOCOM has nine activities designated as special operations core tasks: direct action, counterterrorism, foreign internal defense, unconventional warfare, special reconnaissance, psychological operations, civil affairs operations, information operations, and counterproliferation of weapons of mass destruction.[34] According to doctrine, SOF are organized, equipped, and trained specifically to accomplish these nine tasks.[35]

On one hand, these core tasks might be thought of as a "theory of war" for special operations: how to use SOF in war. However, these tasks are not as specific to SOF as one might think. For example, the U.S. Strategic Command also has the missions of combating weapons of mass destruction, information operations, and global intelligence, surveillance, and reconnaissance.[36] Direct action, special reconnaissance, and foreign internal defense are performed by conventional forces. (Part of the discussion about conventional forces becoming more "SOF-like" is the ability of advanced weapon systems to precisely strike targets that once required SOF operators on the ground or in the water.) In addition to creating confusion about the use and the uniqueness of SOF, designation of specific tasks may limit SOF's flexibility, with the potential to create forces that can perform only one core task. [37]

This discussion further illustrates that it is not the tasks that define special operations. (And also why, in spite of the discussion in the introduction, the atomic bombings in World War II were not special operations but a new capability for strategic bombing.) What follows are discussions of the three fundamental qualities of SOF.

Elite Warriors. The uniqueness and qualities of SOF warriors are almost universally recognized. SOF are specially recruited, assessed, selected, trained, and equipped; have access to national-level intelligence and cutting-edge technology; and demonstrate boldness, intellect, and perseverance. Expected personal values are embodied in the SOF core values:[38]

The uniqueness and qualities of SOF warriors are almost universally recognized.

a. Integrity—can be trusted with the most sensitive missions, be relied on to guard the nation's values, and will operate to the highest moral standards
b. Courage—uncompromising moral and physical courage under all conditions
c. Competence—maintaining the highest levels of tactical and technical competence
d. Creativity—using creative imaginative solutions to accomplish complex demanding challenges.

The new *Capstone Concept for Special Operations* emphasizes the Joint Special Operations Warrior as one of the five "Joint Special Operations Keystone Capability Areas."

> Joint SOF Warriors will need to possess the intellectual agility to conceptualize creative, useful solutions to ambiguous problems and provide coherent options to Joint Forces Commanders (JFCs). SOF will train for discrete skill development and employment, but will necessarily have to receive educational and experience opportunities for multiple skill comprehension, synthesis, and application at the operational and strategic levels of this global war. The key is not to produce specific answers to explicit threats, but to build broad, flexible capabilities to meet the uncertain, shifting nature of the challenge.[39]

Thus SOF warriors require organization for creativity and flexibility.

Creativity. A basic difference between SOF and conventional forces is the ability to be creative or "unconventional." As discussed, the requirements and limitations of conventional forces are determined in part by the need to place themselves in position to destroy the enemy while at the same time avoiding too great a risk of deadly consequences

to themselves. SOF use all available means to accomplish mission objectives without unacceptable risk by using assets in unexpected and "creative" ways. *Creativity* means the ability to immediately change the combat process, altering the way in which the tension is accommodated between threatening or performing destruction and avoiding it.

Creativity means the ability to immediately change the combat process ...

At some level this may seem intuitively obvious. Sending SOF to hit a target that is beyond the reach of conventional forces (changing the process) does bring a threat to the enemy that the conventional forces cannot because the risk is too great (e.g., getting stalled or repulsed in a large conventional assault). But this is far more than a "handful of heroes on desperate ventures."[40] It is not about taking extra risks requiring only extra courage. After all, conventional forces also have heroes. In fact, it is not about *taking* risks at all, because objectively that would just result in more frequent failure. It is dealing with both threat and risk that counts. Performance of a strategically important mission might justify greater risk, but the value of the creativity of SOF is that they can lower the risk associated with accomplishing strategic goals. At the individual level for SOF warriors and at the organizational level for SOF, SOF *overcome* risks that conventional forces cannot by changing the combat process, which is made possible by greater attributes, training, and technology.

Conventional forces attempt to change the combat process as well. For example, this is the reason for new military technologies, which may be more effective at destruction without exposing our forces to as great a risk. However, friction prevents conventional forces from changing the combat process immediately during war except by applying more of existing capabilities, so new combat processes must be institutionalized in new capabilities to be useful. This difference between SOF and conventional forces is that immediately changing the combat process—that is, creativity—is part of SOF's *operational capabilities*, whereas in conventional forces operational capabilities are the result of attempting to change the combat process.

This is why men emerge during war to meet immediate needs that conventional forces cannot. Some men have attributes that allow them to engage in activities that others would perceive as too risky, but

which through superior aptitude, natural skill, dedication to training, or mindset (or other attributes) do not represent the same level of risk to them. When organized together, these men can execute operations to accomplish goals in ways that conventional forces cannot but without a greater risk to themselves, greater risk of failure, or greater risk of negative political consequences. Further, changing the process may also mean accomplishing objectives without the wholesale destruction that may be the only option for conventional forces.

Flexibility. With the wide spread in the distribution of attributes of personnel, the challenge for conventional forces is to create units that are both large enough and can perform specific tasks adequately in the actual operating environment including friction where "... the simplest thing is difficult." Thus conventional warriors (military forces engaged directly in the fundamental nature of war and the implementation of strategy) must have a discipline and a restricted set of specific requirements and capabilities that can be reliably demonstrated even in the most extreme conditions of combat. This is part of managing the tension between threat and risk. It reduces the uncertainty of whether the units will be able to perform, either in threatening or performing destruction or avoiding it. (And it is one reason why new combat processes for conventional forces have to be institutionalized in new capabilities, limiting their creativity.) Since each unit has a limited range of capability within itself, it also makes conventional forces interdependent to contribute to operations and strategy (i.e., combined arms). Since these characteristics of conventional forces are due to timeless friction, they are as true today as in T. E. Lawrence's time:

> The aim was to render the unit a unit, the man a type; in order that their effort might be calculable, and the collective output even in grain and bulk. The deeper the discipline, the lower was the individual excellence; also the more sure the performance.
>
> By this substitution of a sure job for a possible masterpiece, military science made a deliberate sacrifice of capacity in order to reduce the uncertain element, the bionomic factor, in enlisted humanity. Discipline's necessary accompaniment was the product of the multiplied exertions of a long hierar-

chy, from workshop to supply unit, which kept him active in the field.[41]

SOF are organized differently, however, as a product of the different distribution of personnel. Ironically, *flexibility* means that a small SOF unit can have a much larger range of capabilities than even a large conventional unit as a result of the smaller range of more capable personnel. This (along with the other fundamental qualities of SOF) is why modeling conventional forces on SOF (e.g., "modular forces," the Defense Science Board concept for expeditionary forces, and conventional forces that are more "SOF-like") will not work. But the lack of numbers is also why SOF, in general, cannot win the war by themselves, and why they cannot have the full range of overall capabilities represented by the sum of the diverse large units of the much larger conventional forces.

Ironically, flexibility means that a small SOF unit can have a much larger range of capabilities ...

The range of capabilities does, however, make SOF more independent of other military forces in their operations. And flexibility is another reason why SOF have strategic value, since if the strategy changes, SOF (unlike conventional forces) can immediately be redirected.

SOF and the Ultimate Sources of Friction

Recall that these are the ultimate sources of friction: a) constraints imposed by human physical and cognitive limits, b) informational uncertainties and unforeseeable differences between perceived and actual reality, and c) the structural nonlinearity of combat processes.[42] As shorthand, these three sources will be referred to as follows: a) war is hell, b) we can't know what's out there, and c) we can't predict what will happen. Conventional forces must deal with these sources of friction and they limit what conventional forces can do. On the other hand, in operating with friction, we have seen that SOF are creative, flexible, elite warriors. It is no coincidence that the three qualities of SOF that arise from the distribution of attributes of personnel directly address the three ultimate sources of friction. And it will become apparent that SOF use these qualities to address the sources of friction in ways that conventional forces cannot.

War is Hell: Elite Warriors. This source of friction is due to "constraints imposed by human physical and cognitive limits, whose magnitude and effects are inevitably magnified by the intense stresses, pressures, and responses of actual combat." SOF directly address this source of friction by the smaller and tighter distribution of personnel with greater average "attributes" that exceed the constraints of conventional forces and which include among the attributes abilities to better deal with the intense stresses, pressures, and responses of combat. This is why SOF must be elite warriors, engaged directly in the fundamental nature of war and the implementation of strategy: destroying the enemy or creating his fear that he will be destroyed.

We Can't Know What's Out There: Flexibility. This source of friction is due to "informational uncertainties and unforeseeable differences between perceived and actual reality stemming, ultimately, from the spatial temporal dispersion of information in the external environment, in friendly and enemy military organizations, and in the mental constructs of individual participants on both sides." SOF directly address this source of friction by having a wide range of capabilities to discover the "ground truth," including special reconnaissance, language and cultural knowledge, and a wide range of capabilities to apply to specific goals in the face of uncertainty. This is why SOF must be *flexible*, where a small SOF unit can have a much larger range of capabilities than even a large conventional unit as a result of the smaller range of more capable personnel.

We Can't Predict What Will Happen: Creativity. This source of friction is due to "the structural nonlinearity of combat processes that can give rise to the long-term unpredictability of results and emergent phenomena by magnifying the effects of unknowable small differences and unforeseen events (or conversely, producing negligible results from large differences in inputs)." Conventional forces have structure and doctrine to attempt to make results more predictable—for example, by using overwhelming force. SOF use all available means to accomplish mission objectives without unacceptable risk by using assets in unexpected and "creative" ways. SOF execute operations to accomplish goals in ways that conventional forces cannot but without a greater risk to themselves, greater risk of failure, or greater risk of negative political consequences. But if the unpredictability of results and emergent phenomena are due to the nonlinearity of combat processes, how can

SOF avoid the same level of risk that would limit conventional forces? SOF directly address this source of friction by changing the process by which strategic objectives are accomplished. To use a sports metaphor, SOF are *game changers*, and the new game has different limits. This is why SOF must be *creative*, to change the combat process, and why it is not enough for SOF to merely complement the capabilities of conventional forces (and participate in the same "game"). Finally, as Watts points out, it is the relative level of friction with respect to the enemy that counts. SOF's creativity is used to *create* friction for the enemy in ways conventional forces cannot, exploiting their "human limitations, informational uncertainties, and nonlinearity."

Special Operations

Special operations are missions to accomplish strategic objectives where the use of conventional forces would create unacceptable risks due to Clausewitzian friction. Overcoming these risks requires special operations forces that directly address the ultimate sources of friction through qualities that are the result of the distribution of the attributes of SOF personnel. In that sense, a theory of SOF and a theory of special operations cannot be separated.

Friction is caused by all three "ultimate sources," which SOF address by their fundamental qualities; so for SOF to most effectively use their distribution of attributes to accommodate both threat and risk, they must have all three qualities. The three qualities of SOF (elite warriors, creativity, and flexibility) create operational capabilities that allow SOF to have different limitations than conventional forces. McRaven, in his theoretical treatment, intentionally limited his discussion of special operations to direct action[43] and Hy S. Rothstein has extensively addressed unconventional warfare in Afghanistan.[44] Using the present theory of special operations, we will see how both possibilities (as well as others) are included.

The three qualities of SOF (elite warriors, creativity, and flexibility) create operational capabilities that allow SOF to have different limitations than conventional forces.

Since *elite warriors*, *creativity*, and *flexibility* are general qualities (although specifically defined), it may be difficult to discuss their application to operations in a systematic way. However, there are

specific ways that SOF currently use creativity and flexibility as elite warriors to change the limitations that restrict conventional forces. Just as there are many individual attributes for SOF personnel, many probably unknown, there are many characteristics of SOF. In fact, *flexibility* is due to the fact that SOF have a wide range of capabilities. In spite of that, the applications of SOF in special operations follow, specifically, examining their operational capabilities and characteristics.

Operations Other than War.[45] Although the origin of SOF is the result of the need to address the ultimate sources of friction in war, the resulting fundamental qualities are also the source of the important roles SOF play in national security missions in the part of the conflict spectrum that attempts to resolve threats without "major combat operations": in the time before open conflict when we may hope to accomplish national security objectives but avoid war. Examples of this part of the spectrum include capacity-building of partner nations for their own defense, "shaping" operations to set the conditions for resolution of conflict, independent counterterrorism and counterproliferation operations, support for insurgency and counterinsurgency, and low-intensity warfare. For irregular warfare, SOF are the counterpart to an irregular force-in-being. In fact, since almost by definition conventional forces have little role in this part of the conflict spectrum (other than deterrence or a show-of-force), some see this SOF role as the most important. SOF allow a military role in the "other" elements of national power—for example, diplomacy, intelligence, and economics.

Operational Characteristics of SOF. In an attempt to summarize the wide range of current and future capabilities in war and operations other than war, the individual attributes, SOF organization and capabilities, and the fundamental qualities of SOF can be integrated as a few characteristics of SOF that distinguish them from conventional forces, now and probably into the foreseeable future. As an example, the *characteristics of SOF* include strategic initiative, integrated operations, unconventional operations, certain access, and relative superiority. The qualities of SOF (SOF warriors, creativity, and flexibility) directly contribute to each of these characteristics. The proposed characteristics of SOF are an attempt to illustrate how the qualities that SOF use to address the ultimate sources of friction result in operational capabilities.

These characteristics of SOF generally are unique to SOF (what SOF specifically do better or in ways that conventional forces cannot), relatively enduring (capabilities that will be important to war in spite of an uncertain future), and primary operational capabilities of SOF (what SOF can do, not how they do it or what enables them to do it). The ability to perform the current SOF core tasks depends, in turn, on these characteristics of SOF. Note that the term "unconventional operations" is no longer undefined but is a direct expression of creativity; it is retained herein because it is consistent with historical usage. The definitions of these characteristics follow:

a. *Relative superiority* is the ability of small special operations units to gain a temporary decisive advantage, even over a larger or well-defended enemy force.

b. *Certain access* is the ability to rapidly and securely transport, insert, and extract SOF, typically undetected, allowing operations in areas where or when conventional military operations are not possible.

c. *Unconventional operations* is the ability to directly alter the way in which the tension between threatening and avoiding destruction is managed to conduct operations—for example, operating autonomously and independently, establishing and utilizing the capabilities of foreign military and paramilitary forces, sabotage, and subversion.

d. *Integrated operations* is the ability to address transnational and asymmetric threats by integrating elements of national power and operating with other military forces and nonmilitary agencies.

e. *Strategic initiative* is the ability to create and maintain initiative against an enemy at the strategic level by an orchestrated campaign of engaging carefully selected objectives unavailable to conventional forces.

Previous Descriptions of SOF Capabilities. In contrast to these characteristics of SOF, there have been previous attempts to summarize SOF capabilities. First, USSOCOM has previously published "attributes" of SOF:[46]

a. Tailored and integrated operations

b. Agile logistics

c. Regional expertise, presence, and influence
d. Ubiquitous access
e. Precision strike and effects
f. Force protection and survivability
g. Command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) dominance.

Unfortunately, because almost none of these attributes are unique to SOF, we cannot use them to understand the uses of SOF. Almost all (conventional) military forces strive for precision strike and effects; force protection and survivability; and C4ISR dominance, as well as tailored and integrated operations; agile logistics; regional expertise, presence, and influence; and ubiquitous access. These SOF attributes may be important to enable SOF operational capabilities, but they do not represent operational capabilities, *per se*.

The SOF core tasks do represent areas of responsibility for operations, but they also are not all unique to SOF and do not get to the heart of what makes SOF "special." It is the personnel and their organization that are the origins of SOF, and we are seeking a description of what they can do that conventional forces cannot. The core tasks are "tasks," not characteristics or capabilities and, therefore, they already *specifically* assume how the characteristics of SOF are applied, limiting SOF's flexibility. In discussing the applications of SOF, it may sometimes still be useful to express these applications in terms of some of the core tasks.

The USSOCOM *Capstone Concept for Special Operations* (CCSO) includes five *Keystone Capability Areas*:

a. Joint expeditionary SOF
b. Joint special operations warrior
c. Joint special operations command, control, communications, computers, and information (C4I)
d. Joint special operations logistics, acquisition, and resourcing
e. Joint special operations intelligence.[47]

The CCSO also includes a process for developing future SOF capabilities. Again, however, most of these capability areas may be important

to enable SOF operational capabilities, but they do not represent operational capabilities, *per se*.

Joint Publication 3-05, *Doctrine for Joint Special Operations*, lists some capabilities of SOF:

> SOF can be formed into versatile, self-contained teams that provide a JFC with an extremely flexible force capable of operating in ambiguous and swiftly changing scenarios. They can:
>
> 1. Be task-organized quickly and deployed rapidly to provide tailored responses to many different situations.
> 2. Gain access to hostile or denied areas.
> 3. Provide limited medical support for themselves and those they support.
> 4. Communicate worldwide with organic equipment.
> 5. Conduct operations in austere, harsh environments without extensive support.
> 6. Survey and assess local situations and report these assessments rapidly.
> 7. Work closely with regional military and civilian authorities and populations.
> 8. Organize people into working teams to help solve local problems.
> 9. Deploy with a generally lower profile and less intrusive presence than larger conventional forces.
> 10. Provide unconventional options for addressing ambiguous situations.[48]

While these capabilities allude to creativity and flexibility, other than "unconventional options" they do not list any capabilities for directly engaging in strategic operations against the enemy in war or operations other than war. This list of capabilities could just as easily describe a nonmilitary organization. Some of these capabilities are enablers while others actually are central to special operations. This paper integrates these capabilities and others into the operational characteristics of SOF.

Strategic Applications of SOF

Cry 'Havoc,' and let slip the dogs of war.

— William Shakespeare

Since SOF have fundamentally different limitations than conventional forces, due to the fundamental qualities of SOF that address the ultimate sources of friction, SOF are not merely complementary to conventional forces but can make strategic contributions of their own. What follows is an illustration of how these applications can be understood using the concepts developed. The applications are merely examples, not a complete logical implementation of SOF's capabilities (which would be impossible anyway due to SOF's creativity and flexibility). Historical examples are taken mostly from popular accounts, and the reader will almost certainly be able to provide better examples of his own. But that is the point. The purpose of the examples is to demonstrate that once we understand the origin, qualities, and operational characteristics of SOF, it is much easier to discuss their strategic contributions.

... SOF are not merely complementary to conventional forces but can make strategic contributions of their own.

Using the principles of war—objective, offensive, mass, economy of force, maneuver, unity of command, security, surprise, and simplicity—as an outline is a way to organize SOF's strategic contributions.[49] In Joint Publication 3-05, the principles of war are applied to special operations, especially at the tactical level.[50] The discussion here, however, is the *exact opposite*. To help understand the contribution of SOF to warfare and to national security in operations other than war, we will look at examples of the application of SOF to the principles of war when used to implement strategy. Once the war starts and we are executing strategy, plans, and tactics, the misuse of SOF can be avoided if we ask the question, How does this SOF mission contribute to applying the principles of war to implement the strategy in ways that conventional forces cannot?

Objective. When people think of special operations, they often think of *direct action* missions against high-value targets of importance to the JFC, especially targets that cannot be attacked by conventional forces. This is an example of the application of Objective at the tactical level. It is also one of the sources of confusion about the use of

SOF because technophiles assume that all targets can (eventually) be attacked through appropriately advanced technology.

Thinking about applying SOF to Objective, however, should start with the strategic objectives for which wars are fought. One of the sources of friction is "disconnects between ends and means." Conventional military forces may not provide the means to accomplish the political objectives. One of the greatest strategic contributions of SOF is that they provide unique or additional means to address these objectives. This is, of course, the "theoretical" origin of the assignment for USSOCOM to take the lead in the war on terrorism.

There are some political objectives that may only be met by the use of SOF. When the U.S. needs to act unilaterally, but large conventional forces cannot achieve the objective, SOF provides countervailing, discerning, or discretionary applications of military force.[51] For example, resolving the 1979 Iranian hostage crisis became strategically important to the United States.[52] Using conventional forces to invade Iran and attempt to free the hostages would have initiated a war and led to the death of the hostages, circumventing the political objective. Examples of *successful* hostage rescues include the raid on Entebbe[53] and the rescue of Kurt Muse from Modelo Prison, Panama, in Operation Just Cause.[54] Since SOF have the characteristics of *certain access*, *integrated operations*, and *relative superiority*, they are capable of hostage rescue. Note that it is not hostage rescue, *per se*, that is the characteristic of SOF. (It is not the core task of *counterterrorism* that helps define SOF, but SOF have characteristics that allow them to do counterterrorism.) Whether rescuing hostages is strategically important depends on the political objectives.

As another example, the network concept is widely used in modern military thought. Enemies, including terrorists, are conceptualized as networks to provide a basis to discuss attacking them.[55] For example, the mission statement of the Joint Warfare Analysis Center is to provide "combatant commands, Joint Staff, and other customers with responsive, effects-based, precision-targeting options for selected networks and nodes in order to carry out national security and military strategies of the United States during peace, crisis, and war."[56] In fact, the network concept could be applied to everything from the Spanish Armada to German oil production and their atomic bomb project in World War II to North Vietnamese power grids and dikes.[57] If *everything* is a network, the concept may lose its analytical power.

On the other hand, if everything is a network, we can discuss Objective with respect to networks in general.

We have asserted elsewhere that there are at least four ways to attack a network.[58] The first is to overwhelm the entire network. The second is to interdict critical nodes or links. The third is to establish operational superiority and interdict nodes or links when necessary or convenient. And the fourth is to isolate and degrade a portion of the network to reduce its efficiency. Therefore, these are four possible strategic objectives.

SOF can play a strategic role in each of these potential objectives. For example, a unique SOF role in the strategic objective of "overwhelming everything" could be to create *strategic initiative* in advance of overwhelming conventional forces. The unique SOF role in the strategic objective of interdicting critical nodes could be to attack critical nodes that are vulnerable to special operations attack. A unique SOF role in the strategic objective of operational superiority might be one of the following:

a. *Unconventional warfare* to establish superiority of supported forces
b. Establish a kind of "SOF superiority" (*à la* air superiority) to wage cumulative warfare by using *certain access* to rapidly engage desired targets.

Finally, unique SOF roles in the strategic objective of isolating and degrading could be to create friction for the enemy through direct action and psychological operations and a cumulative campaign to create *strategic initiative* by indirect means.

With respect to the war on terrorism, terrorism as criminal political violence could be viewed as a law-enforcement problem.[59] Fighting terrorism as an international criminal activity includes law enforcement, diplomacy, international cooperation, and foreign assistance. The role of the military is to support these activities, and SOF can contribute to most of these in operations other than war. However the fundamental purpose of the military is to wage and win the nation's wars. A specific terrorist enemy in war would require all of the actions prior described *and* a primary role for military force. This may be especially justified if the threat is not low-level political violence that could remain in the domain of law enforcement but is catastrophic terrorism, especially the use of weapons of mass destruction (WMD) that can be viewed

as waging war on U.S. civilians. *A strategic objective would then be to prevent escalation to catastrophic terrorist attacks.*

The use of WMD by terrorists is likely to require an identifiable and relatively stable organizational structure to garner and maintain control over necessary resources and the weapons themselves. (Compared with other terrorist methods, WMD require more technical resources including technical people with critical skills; and a bureaucratic structure may more effectively characterize the complex social infrastructure needed for the development of WMD than does a "network.") Therefore, SOF can contribute to this Objective in at least two ways: create and sustain *strategic initiative* against specific terrorist enemies (discussed below) and destroy the terrorist enemies' capability to conduct large-scale terrorism. Destruction of capabilities may require the politics of war—for example, violation of other states' sovereignty, capturing or killing enemy personnel, interception and destruction of foreign vessels and aircraft, seizure of foreign assets, and acceptance of collateral damage and accidental innocent casualties. There is a critical role for SOF operators with strategic impact at the point of contact to utilize discretion in these actions, managing the balance between threat and risk at the strategic level.

Offensive. Joint Publication 3-05 says, "The lethal applications [of special operations] are inherently offensive in nature because they seek to strike or engage an adversary to compel or deter his actions." However, it is not whether SOF are offensive, but rather how SOF contribute to the overall principle of the Offensive that matters. This is another great strategic SOF contribution. SOF can create initiative, even independently of conventional forces.

The Offensive in the form of strategic initiative is very important.[60] Initiative is taking the fight to the enemy instead of passively waiting for the enemy to act, making the fight when and where we choose. Without the initiative, strategists can make no decisions of their own. Because of the time gap between strategic cause and effect, we must seize the initiative from the outset, forcing others to react. Seizing, retaining, and exploiting the initiative allows one to set the strategic agenda, shapes the strategic environment, forces the enemy to react to changing conditions, and provides freedom of action in formulating and adapting strategy to the evolving context.

Successful special operations can seize and retain the initiative at the tactical level even when opposed by an enemy force superior in numbers. As McRaven observed in describing the concept of relative superiority, "Once relative superiority is achieved, the attacking force is no longer at a disadvantage and has the initiative ..."[61] However, in an integrated campaign, the cumulative effect of tactical initiatives that only SOF can create can lead to strategic initiative.

After Dunkirk, and especially until the landing at Normandy, the British turned to the use of special means as a way to establish strategic initiative. It was considered an important strategy to fight for the initiative even though there was no chance to immediately exploit any gains. According to *Bodyguard of Lies*, Anthony Cave Brown's classic book on special and deception operations in World War II, "... the British believed that the Third Reich was immensely powerful and before such an invasion could be launched, there would have to be a long, hard bloody struggle to disperse Germany's forces and sap her strength. Therefore, they advocated a stealthy, patient, indirect strategy—a strategy of superior wits and special means."[62]

Operation Just Cause was designed as an overwhelming application of force to defeat the Panama Defense Forces (PDF) and Manuel Noriega's "Dignity Battalions." SOF were used before the start of the overall offensive to create *strategic initiative* for conventional forces and to create initiative against the strategic objective, Noriega himself:

> ... most went into action well before the 1:00 a.m. start scheduled for Just Cause on 20 December. These units assaulted critical PDF garrisons, airports, and key media and transportation facilities. But the primary target was Noriega himself ... The Americans wanted to cut Noriega off from controlling his troops and directing resistance as he had during the October coup.[63]

In fact, hoping to avoid capture, Noriega disappeared for 4 days until he sought sanctuary in the Papal nunciature. SOF created friction for the enemy and strategic initiative for U.S. forces.

With respect to the war on terrorism, SOF could be used to establish and maintain *strategic initiative* against specific terrorist enemies. For example, one of the strategic issues in the war on terrorism is that transnational terrorist organizations use ungoverned or denied areas to provide them with freedom to acquire resources, plan, and

train. SOF can use its characteristics (e.g., *certain access, strategic initiative*) to deny terrorists these sanctuaries. As discussed, this would force the terrorist enemy to react to our actions, giving the U.S. freedom to adjust operations as the situation demands. It would also interfere with the capabilities of the enemy to perform acts of terror by creating uncertainty and friction in the enemy as well as destroying or degrading terrorist capabilities and resources. Strategic initiative would also interfere with the timescale of potential terrorist attacks and divert terrorist resources away from planning and executing attacks to address their organizational security.

Mass. A critical part of succeeding at war is Mass. Being able to threaten or perform destruction against the enemy requires placing the appropriate mass of military forces (or effects, some would argue) in an effective position at the appropriate time. Since SOF are a small fraction of overall military forces, it may seem that they have no role to play in providing Mass to accomplish strategic objectives. However, the great strategic value of SOF in providing Mass is to provide *somebody else's Mass*. SOF can do this through enabling partner nations and unconventional warfare. "Unconventional Warfare (working by, with, and through indigenous or surrogate forces), foreign counterpart training, civil-military operations, information distribution, civil infrastructure support, and many other actions (*sic*) contributing to the economic and social welfare in at-risk areas are the hallmarks of Special Operations."[64]

One of the strategic elements of the *National Military Strategic Plan for the War on Terrorism* is to "expand foreign partnerships and partnership capacity to counter terrorism."[65] For example, "In the Philippines, U.S. special operations helped weaken the radical Islamist Abu Sayyaf Group, which had kidnapped two Americans, through military training, road building, and medical aid that won popular support and led to the collection of useful new intelligence. After succeeding on Basilan Island, they have moved to another historic hotbed, Jolo Island. The commander of the task force called it 'a model for how the U.S. can wage the war on terror in a country where we are not at war, and sustain it over the long term.'"[66] In another example, in Asia alone, SOF conduct numerous training exercises a year.[67]

The use of unconventional warfare to provide Mass in defeat of an enemy in war is amply illustrated by Operation Enduring Freedom

(OEF) in Afghanistan. U.S. SOF worked by, with, and through indigenous forces to defeat the Taliban and deny Al Qaeda the use of the whole of Afghanistan as a sanctuary.[68,69]

> In early November, 2001 Army Special Forces teams (often reinforced with Air Force Special Tactics Team members) infiltrated Afghanistan via SOF aircraft and linked up with anti-Taliban Afghan forces. Their unconventional warfare mission was to facilitate the overthrow of the Taliban regime. These SOF teams immediately gained the confidence of the Afghans, and between the intelligence they received from the Afghans and what they were able to determine themselves, the arrival of the SOF teams produced an immediate and exponential increase in the number of Taliban targets that could be identified to conventional strike aircraft. In addition to radically increasing the effectiveness of U.S. airpower, the unconventional warfare teams also improved the effectiveness of the Afghan anti-Taliban forces they joined. Less than a month after the first unconventional warfare team arrived in country, the fall of the Taliban had begun, and in the weeks that followed, the last regions under Taliban control were liberated by anti-Taliban Afghan forces.[70]

Economy of Force. Applying the principle of *economy of force* may lead to the misuse of SOF, thinking that as more capable elite warriors they are just more economical conventional forces. (This would be the role of *elite forces*, not SOF.) But there are many cases where one of the strategic objectives is to minimize the presence of U.S. forces. Then the use of SOF may make some military operations possible that otherwise would be counterproductive. Unconventional warfare can be viewed partly as economy of force; by using the capabilities of indigenous forces, we minimize the U.S. presence.

Economy of force can also refer to accomplishing strategic objectives without resorting to the use of force at all, preventing the commitment or use of large numbers of conventional forces to resolve a conflict. Many SOF activities in operations other than war fall into this category. However, recall that the value of SOF in "peacetime" is derived from their unique roles in war. And another way in which SOF can contribute to economy of force is operations against critical links

or nodes, if they exist, in an enemy's networked strategic capabilities (see Objective, above).

Maneuver. According to Joint Publication 3-0, *Joint Operations*,

> Maneuver is the movement of forces in relation to the enemy to secure or retain positional advantage, usually in order to deliver—or threaten delivery of—the direct and indirect fires of the maneuvering force. Effective maneuver keeps the enemy off balance and thus also protects the friendly force. It contributes materially in exploiting successes, preserving freedom of action, and reducing vulnerability by continually posing new problems for the enemy.[71]

SOF can contribute to Maneuver by *strategic initiative* to create the conditions that allow the movement of conventional forces to positions of advantage (e.g., by creating friction for the enemy) and by strategic reconnaissance (using *certain access* and *unconventional operations*) to reduce friction for U.S. forces.

Desert Storm is often cited as an example of a triumph of maneuver warfare. The eastern end of Iraqi forces in Kuwait was fixed by the Persian Gulf, and their west flank was exposed. Conventional coalition forces executed a wide-flanking movement to envelop the Iraqi forces in Iraq itself.[72] Although SOF were relatively distrusted by the coalition commander, General Norman Schwarzkopf,[73] they did play a role in strategic reconnaissance and contributed to the air campaign to create initiative. For example, before the ground war began, U.S. Special Forces reportedly reconnoitered Iraqi troop concentrations, performed laser designation of targets for air-delivered munitions, disabled Iraqi communications, and blew up bridges.[74]

Unity of Command. Since SOF have the characteristics of *integrated* and *unconventional operations*, they can play a strategic role in Unity of Command of U.S., allied, and coalition forces. SOF can integrate the elements of national power with other U.S. government agencies for both unilateral U.S. and coalition operations. And for applications of the military element of national power when the U.S. still prefers discernment, but is willing to participate in multinational or coalition operations, SOF achieves strategic utility as a tool of U.S. foreign policy.[75] In this latter role, SOF contributes to keeping conflict at the low end of the spectrum.

A more visible role in achieving unity of command is in coalition operations where SOF can perform liaison functions because of their cultural and language capabilities. In Desert Storm, "... most of the U.S. Special Forces personnel were assigned to the...vital task of accompanying allied Arab units to ensure smooth coordination with other allied units (Arab and non-Arab)."[76]

Security. In some cases, SOF can contribute to security of the overall military effort by not putting the conventional forces at risk to accomplish a strategic objective when SOF can deal with the risks to themselves through *elite warriors* and *creativity* in accomplishing that objective by some other means. In other cases, SOF can perform operations specifically to provide strategic security for the overall force. Two examples of the latter are the elimination of Hitler's atomic bomb project in World War II and Scud hunting in Desert Storm.

Germany had an atomic bomb project in World War II. Since the allies did not know how little advanced the German atomic bomb project was, the attempt to defeat Germany had to seriously consider the potential for an atomic defense. Because of their research focus, heavy water was the key to the German bomb project and the Ryukan, Norway heavy-water plant really was a critical node.[77]

Four attacks occurred on German heavy water and its production. The two successful attacks were executed by the British Special Operations Executive (SOE). The first attack consisted of a glider assault with 34 engineer commandos. The gliders crashed, and German forces killed the survivors. The final assault team for the first successful attack consisted of nine men: a four-man demolition party and a five-man covering party. The operators parachuted into Norway, skied, and walked until they descended into a 600-foot-deep gorge and crossed an icy river. They ascended the gorge and walked to the plant, gaining access to the grounds by cutting the chain on a railway gate and breaking a window. They laid their charges, which exploded while they were still on the grounds.

Damage from the demolition attack was repaired, and the plant was unsuccessfully bombed by the allies, which caused the Germans to decide to move the equipment and heavy water to Germany, crossing Lake Tinn by ferry. The second successful attack was performed by only three men. In the early morning of the day of the shipment, before the heavy water arrived by rail, three operators boarded the

docked, unguarded ferry. While one operator engaged the night watchman in conversation, the other two men planted an improvised charge below the floor along the keel. The explosion occurred when the ferry was in the middle of the lake, and it sank in 300 meters of water. The successful attacks were examples of *elite warriors*, *certain access*, *unconventional operations*, and *strategic initiative* (for the allied invasion of Europe).

In Desert Storm, security of coalition forces and security of the coalition itself were threatened by Iraqi Scud missile attacks against coalition forces in Saudi Arabia and against Israel. If Israel entered the war, the coalition with Arab forces would be threatened. Mobile Scud launchers were a significant problem that conventional forces could not neutralize:

> To a pilot flying at 10,000 feet, a missile in its horizontal, travelling attitude looked just like an oil tanker and, if it was parked under a motorway bridge, a favourite hiding place, it could not be seen at all by satellites or surveillance aircraft; yet it could be run out, set up, and launched in only 20 minutes. Then, even if surveillance satellites pinpointed its position from the heat of the launch, its erector-trailer would have disappeared again by the time an aircraft could be directed to the spot.[78]

Priority for both the British Special Air Service (SAS) and U.S. SOF became "Scud hunting." General Sir Peter de la Billière, commander of all British forces in Desert Storm, described the SAS effort using *certain access*, *unconventional operations*, and the qualities of *elite warriors*, *creativity*, and *flexibility*:

> ... once the SAS had begun their surveillance, they were soon able to identify a missile on the move, along with its support vehicles. They could then follow it and destroy it themselves or call in an air strike. By these means, and by continuously refining their own tactics, they turned the campaign into one of outstanding success. Not only did they take out launchers with ruthless precision, but also the suddenness of their own attacks and the uncanny speed with which enemy aircraft arrived overhead so inhibited the remaining launch teams that after a while the Iraqis scarcely dared to bring their

> weapons into the open. The result was that attacks on Israel were effectively suppressed.[79]

Surprise. Another way in which SOF can make a strategic contribution is to contribute to surprise in the operations of the overall military campaign. Anthony Cave Brown has written the definitive description of deception operations in World War II, *Bodyguard of Lies*.[80] Brown has many examples of the use of the qualities and characteristics of SOF (e.g., *creativity, certain access*), especially to conceal the true location of the allied D-Day landings in Normandy.

Another widely cited example of deception operations, in Desert Storm, was the potential amphibious landing in Kuwait proper to hold Iraqi forces in place while U.S. and allied ground forces prepared for the "end run" to the west.[81] The most suitable beach for an amphibious landing was apparently also heavily defended by the Iraqis. The night of the start of the overall ground offensive, 15 U.S. Navy SEALs were inserted by two high-speed patrol boats, transferring to three inflatable Zodiacs. About 500 yards from shore, six SEALs left the Zodiacs and swam to the shallow water just off the beach. The swimmers each placed 20 pounds of C4 explosives along a total of about an eighth of a mile of beach to simulate demolition charges that would be used to clear obstacles for an amphibious landing. They also anchored two rows of blue-and-white buoys to simulate marking lanes for Marine landing craft.

When the charges detonated, "... instead of making one big bang, they exploded at irregular intervals of 2 to 10 minutes apart. The result was to give the defenders a solid half hour of excitement. The explosions on the beach seemed to mean only one thing: the demolition of beach defenses in preparation for a landing."[82] The U.S. Central Command stated that elements of two Iraqi divisions reacted and moved as a result of the operation. "As the marines knifed forward through the Iraqi defenses that morning, there was no doubt that the SEALs—just six of them—had made a difference in the conduct of the war by suckering the Iraqis out of position."[83]

Simplicity. The use of SOF may be the simplest way to accomplish a strategic objective. On 2 April 1972, Lt Col Iceal Hambleton was shot down just south of the demilitarized zone (DMZ) between North and South Vietnam.[84] He was the only survivor of the six-man crew of an EB-66C. At that point of the war, when the U.S. was ending its

involvement, a major political objective was the return of the prisoners of war (POWs) held by North Vietnam. Combat search and rescue had become a *de facto* strategic mission, partly to prevent further POWs and partly because of the perceived lack of other meaningful air power objectives.[85] This objective remained because the success of air power in general depends in part on the belief by pilots that, "... if they were hit and had to eject behind enemy lines, regardless of location or situation, their buddies would not abandon them, and the rescue crews would make every effort to find them and get them out."[86]

Hambleton parachuted into the middle of a major conventional North Vietnamese offensive, the largest attack of the Vietnam War. "Over 30,000 men from elements of the 304th and 308th Divisions, along with three separate infantry regiments of the B5 front, two tank regiments, and five artillery regiments, entered the ground campaign of the Nguyen Offensive in a decisive struggle for control of the South."[87] The North Vietnamese Army (NVA) knew that in 1972 the U.S. would not commit ground forces but would respond with air power, so they were prepared with "the heaviest, most sophisticated air defenses yet seen in the war."[88]

These air defenses, as well as the large enemy ground forces, made the search-and-rescue effort for Hambleton extremely risky. The only way that the conventional forces could attempt to "alter the combat process" and lower the risk was to apply more of the same capabilities in air strikes and air-search-and-rescue forces. It was not enough. Six more aircraft were shot down and many others damaged beyond repair. Eight would-be rescuers were killed, two were captured by the NVA, and two more (1st Lieutenants Bruce Walker and Mark Clark) ended up attempting to evade capture along with Hambleton.

At that point, Navy SEAL Lieutenant Tom Norris simply patrolled by land and operated an indigenous boat in enemy territory to rescue Hambleton and Clark, who were instructed to move to the Mieu Gang River. (Due to heavy enemy presence, Walker was unable to move to the river for rescue and was eventually killed.) Tom Norris's Medal of Honor citation reads, in part:

> Lieutenant Norris, on the night of 10 April, led a five-man patrol through 2,000 meters of heavily controlled enemy territory, located one of the pilots at daybreak, and returned to the forward operating base (FOB). On 11 April, after a

> devastating mortar and rocket attack on the small FOB, Lieutenant Norris led a three-man team on two unsuccessful rescue attempts for the second pilot. On the afternoon of the 12th, a forward air controller located the pilot and notified Lieutenant Norris. Dressed in fisherman disguises and using a sampan, Lieutenant Norris and one Vietnamese traveled throughout the night and found the injured pilot at dawn. Covering the pilot with bamboo and vegetation, they began the return journey, successfully evading a North Vietnamese patrol. Approaching the FOB, they came under heavy machine gun fire. Lieutenant Norris called in an air strike and a smoke screen, allowing the rescue party to reach the FOB.[89]

Using *creativity* and *flexibility* as an *elite warrior* allowed Norris to change the risk associated with accomplishing the objective and to rescue Hambleton and Clark.

Synthesis

A theory of special operations is needed for at least three reasons:

a. Conventional wisdom sees a growing role for SOF. A theory can help effectively fight the current war on terrorism and address the future challenges to our security.

b. Special operations have always been discussed in terms of their potential and actual strategic impact, and a theory is needed for this strategic capability.

c. A theory would be valuable to improve the institution of SOF by creating the ability to explain what institutional features (e.g., organization, doctrine, and use of technology) help or hinder the strategic uses of SOF.

The present theory of special operations is based on the enduring limitations of conventional forces, based in turn on the immutable nature of war itself. The requirements of military forces are determined by the need to place ourselves in position to destroy the enemy *while at the same time* avoiding too great a risk of deadly consequences to ourselves. This enduring nature of war creates friction, which has three ultimate sources in war.

The effect of friction is to create risks of various kinds, including risk to our forces, risk of failure to accomplish strategic objectives, and risk of negative political consequences. Special operations are

missions to accomplish strategic objectives where the use of conventional forces would create unacceptable risks. Overcoming these risks requires special operations forces that directly address the ultimate sources of friction. SOF overcome risks through qualities that are the result of the distribution of the attributes of SOF personnel.

The distributions of attributes for SOF personnel are different than the distributions for the military, in general. In the SOF distributions, the average performance is much higher and the spread is smaller because there is a minimum standard against which these personnel were selected. For SOF the most important attributes may not be physical capabilities but mental and psychological attributes. These distributions of many attributes create three fundamental qualities of SOF.

SOF are elite warriors, creative, and flexible. *Warriors* means that SOF are engaged directly in the fundamental nature of war and the implementation of strategy, destroying the enemy or creating his fear that he will be destroyed. *Creative* means that SOF can immediately change the combat process, altering the way in which the tension is accommodated between threatening or performing destruction and avoiding it. *Flexible* means that SOF units have a much larger range of capabilities and are more independent of other military forces than conventional units.

The three qualities of SOF that arise from the distribution of attributes of personnel directly address the three ultimate sources of friction, and SOF use these qualities to address the sources of friction in ways that conventional forces cannot.

War is Hell: Elite Warriors. This source of friction is due to "constraints imposed by human physical and cognitive limits, whose magnitude and effects are inevitably magnified by the intense stresses, pressures, and responses of actual combat." SOF directly address this source of friction by the distributions of attributes that include abilities to better deal with the intense stresses, pressures, and responses of combat.

We Can't Know What's Out There: Flexibility. This source of friction is due to "informational uncertainties and unforeseeable differences between perceived and actual reality stemming, ultimately, from the spatial temporal dispersion of information in the external environment, in friendly and enemy military organizations, and in the mental constructs of individual participants on both sides." SOF directly address

this source of friction by having a wide range of capabilities to discover the "ground truth," including special reconnaissance, language and cultural knowledge, and a wide range of capabilities to apply to specific goals in the face of uncertainty. A small SOF unit can have a much larger range of capabilities than even a large conventional unit as a result of the smaller range of more capable personnel. The range of capabilities makes SOF more independent of other military forces in their operations.

We Can't Predict What Will Happen: Creativity. This source of friction is due to "the structural nonlinearity of combat processes that can give rise to the long-term unpredictability of results and emergent phenomena by magnifying the effects of unknowable small differences and unforeseen events (or conversely, producing negligible results from large differences in inputs)." SOF directly address this source of friction by immediately changing the combat process, altering the way in which the tension is accommodated between threatening or performing destruction and avoiding it. At the individual level for SOF warriors and at the organizational level for SOF, SOF *overcome* risks that conventional forces cannot by changing the combat process, which is made possible by greater attributes, training, and technology. SOF execute operations to accomplish goals in ways that conventional forces cannot but without a greater risk to themselves, greater risk of failure, or greater risk of negative political consequences. SOF's creativity is also used to create friction for the enemy.

Although the origin of SOF is the result of the need to address the ultimate sources of friction in war, the resulting fundamental qualities are also the source of the important roles SOF play in national security missions in operations other than war.

The individual attributes, SOF organization and capabilities, and the fundamental qualities of SOF can be integrated as a few operational characteristics of SOF that distinguish them from conventional forces. As an example, the characteristics of SOF include strategic initiative, integrated operations, unconventional operations, certain access, and relative superiority.

Since SOF have fundamentally different limitations than conventional forces, SOF are not merely complementary to conventional forces but can make strategic contributions of their own. It is not the purpose of SOF to fill niches or complement conventional forces. The

appropriate characteristics of SOF can be applied to all the principles of war, independent of conventional forces, to understand ways in which SOF can directly contribute to the implementation of strategy.

A theory of special operations can be stated concisely: special operations are missions to accomplish strategic objectives where the use of conventional forces would create unacceptable risks due to Clausewitzian friction. Overcoming these risks requires special operations forces that directly address the ultimate sources of friction through qualities that are the result of the distribution of the attributes of SOF personnel.

Endnotes

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7. James Kiras, *op cit.*, p. 217.
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11. William H. McRaven, *Spec Ops: Case Studies in Special Operations Warfare Theory and Practice* (Novato, CA: Presidio Press, 1995).
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24. Michael J. Mazarr, *op cit.*
25. Barry D. Watts, *op cit.*, pp. 19-21.
26. David S. Alberts, John J. Garstka, and Frederick P. Stein, *Network Centric Warfare* (Washington, DC: DoD C4ISR Cooperative Research Program, 1999), p. 72.
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35. *Ibid.*, p. II-3.
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